REMARKS

Claims 1-6 are canceled and claims 7-24 are added. Support for the added claims appears throughout the specification as filed, e.g., p. 2, lines 4-15 and lines 19-27 and the original claims. None of these amendments adds new matter.

It is respectfully submitted that the present response presents no new issues or new matter and places this case in condition for allowance. Reconsideration of the application in view of the following remarks is requested.

I. The Rejection of Claims 1-6 under 35 U.S.C. 103

Claims 1-6 remain rejected under 35 U.S.C. 103 as allegedly being unpatentable over JP 2622563 ("R1") in view of JP 58190346 ("R2") and US 4,567,046 ("R3"). This rejection is respectfully traversed.

Obviousness is resolved by examining (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) secondary considerations of non-obviousness. Graham v. John Deere Co., 383 U.S. 1, 17-18 (1966).

Applicants' claims are directed to processes and compositions comprising a lipoxygenase and a lipolytic enzyme active on polar lipids, wherein the lipoxygenase and the lipolytic enzyme are added in amounts producing a synergistic effect on the volume of an edible or baked product.

As previously set forth, the English-language machine translation of R1 discloses the addition of wheat lipoxygenase in an amount of 50-500 units per gram of wheat flour, which is allegedly effective in increasing the volume and whiteness of bread. As the Examiner admits, R1 is silent as to the use of lipolytic enzymes active on polar lipids in a dough, let alone lipoxygenase and lipolytic enzyme active on polar lipids in amounts producing a synergistic effect on the volume of the edible or baked product. Nor do R2 and/or R3 cure this defect.

The English-language machine translation of R2 discloses the addition of lipoxygenase and lisophosphatidine, as well as L-cysteine, collagen hydrosylate and an amino acid such as lysine, proline or arginine, which purportedly results in large specific volume, good appearance and texture of bread. Again, as the Examiner admits, nowhere does R2 teach or suggest the addition of a lipolytic enzyme active on polar lipids in the dough, let alone lipoxygenase and lipolytic enzyme active on polar lipids in amounts producing a synergistic effect on the volume of the edible or baked product.

R3 discloses the addition of phospholipase to dough. However, R3 is silent as to lipoxygenase, let alone lipoxygenase and lipolytic enzyme active on polar lipids in amounts producing a synergistic effect on the volume of the edible or baked product.

Thus, Applicants respectfully submit that none of R1, R2 or R3, alone or in combination, teach or suggest the claimed invention.

Nevertheless, Applicants submit that even if a *prima facie* case is assumed to have been established (which Applicants do not concede), such a *prima facie* case is overcome by the unexpected results achieved with the instant invention, i.e., the synergistic effect of the combination of the lipoxygenase and the lipolytic enzyme.

As set forth in the MPEP, greater than expected results are evidence of nonobviousness. MPEP 716.02(a). Evidence of a greater than expected result may be shown by demonstrating an effect which is greater than the sum of each of the effects taken separately (i.e., by demonstrating "synergism"). Applicants have so demonstrated. Moreover, the greater than additive effect demonstrated by Applicants is unexpected.

In this regard, Applicants direct the Examiner's attention to the table in Example 1 of the specification as filed. Reference bread baked from dough having phospholipase only has a specific volume of 4.78 mL/g and 111%. Reference bread baked from dough having lipoxygenase (LOX) only has a specific volume of 4.45 mL/g and 103%. In contrast, the bread baked from dough according to the invention having phospholipase and LOX demonstrates a synergistic effect on volume, having a specific volume of 5.06 mL/g and 117%. Moreover, the bread baked from dough according to the invention has improved crumb color as compared to the bread baked from reference doughs.

For the foregoing reasons, Applicants submit that the claims overcome the rejection under 35 U.S.C. 103. Applicants respectfully request reconsideration and withdrawal of the rejection.

II. Conclusion

In view of the above, it is respectfully submitted that all claims are in condition for allowance. Early action to that end is respectfully requested. The Examiner is hereby invited to contact the undersigned by telephone if there are any questions concerning this amendment or application.

All required fees were charged to Novozymes North America, Inc.'s Deposit Account No. 50-1701 at the time of electronic filing. The USPTO is authorized to charge this Deposit Account should any additional fees be due.

Respectfully submitted,

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